

RIVER STAGES AND FLOODS FOR APRIL 1947

C. R. JORDAN

Precipitation was above normal during April over most of the eastern half of the United States. There was also an area of above-normal precipitation covering eastern Washington and northern Idaho, and a narrow belt extending through central Nevada, northwestern Utah, and western Wyoming. The greatest departures from normal were in Nebraska, Kansas, Iowa, northern Illinois, and southern Michigan, where more than twice the usual amounts were recorded. It was drier than usual in most of Tennessee, North Carolina, Virginia, and West Virginia, and in the western part of the country, except for the two areas previously mentioned. Less than half the normal amounts fell over a broad strip from southern Texas to southern California, and no precipitation occurred in southwestern Arizona and southeastern California.

Damaging floods occurred from northern Illinois to western New York and northern Pennsylvania as a result of heavy precipitation, augmented somewhat by melting snow. The greatest overflow since 1904 occurred in southern Michigan. Run-off was excessive over a broad strip of the Central Valley region from North Dakota and Minnesota to the central Gulf region, and considerable flooding occurred in many streams.

Drought conditions continued in the Far Southwest.

Hudson Bay drainage.—Considerable damage accompanied the annual break-up of the Red River of the North, below Fargo, N. Dak. The crest of the river at Grand Forks, N. Dak., exceeded that of the 1943 flood but was considerably below the record stage of 1897.

Great Lakes drainage.—Record floods in Michigan occurred as a result of heavy rains on above-normal snow cover. The heavy rains fell in two distinct storm periods, April 1-2 and April 4-6.

Moderate rain over southern Michigan on April 1 and 2, raised river levels to near-flood stage, and in a few streams, including the Red Cedar River, to slightly above flood stage. The streams were still high and just beginning to recede when general rains began again on the 4th and continued through the 5th and 6th. These rains reached heavy proportions, generally ranging from 2 to 3 inches over southern Michigan and reaching as much as 4 inches in some areas. In consequence, all streams over the affected region rose steadily, culminating in the greatest overflow in southern Michigan since the great flood of 1904. The floods rank among the worst of record in the Mount Clemens, Flint, Williamston, East Lansing, Lansing, Grand Rapids, Battle Creek, and Kalamazoo areas, and doubtless in many other localities. Devastation was widespread and estimated damage reached into millions of dollars. A tabulation of crest stages at numerous stations as compared with the previous highest stages of record follows:

TABLE 1.—Crests of 1947 floods as compared with previous highest stages of record

River and station	Flood stage	April 1947		Prior to 1947	
		Stage ¹	Date	Stage	Date
Red Cedar:					
Williamston, Mich.....	7	12.0	6	9.3	Feb. 14, 1938.
East Lansing, Mich.....	8	12.3	7	12.0	Mar. 15, 1918.
Grand:					
Eaton Rapids, Mich.....	6	9.1	6	8.8	Mar. 14, 1918.
Diamondale, Mich.....	7	8.0	6	8.9	June 3, 1943.
Lansing, Mich.....	11	16.9	7	16.7	Mar. 16, 1918.
Grand Ledge, Mich.....	11	12.0	7	11.9	Feb. 16, 1918.
Grand Rapids, Mich.....	15	17.6	9	18.5	Jan. 24, 1907.
Shlawassee: Owosso, Mich.....	7	10.3	6	9.0	Mar. 17, 1942.
Flint: Flint, Mich.....	11	16.3	6	11.2	Feb. 13-14, 1938.
Cass: Vassar, Mich.....	14	17.8	6	19.0	Mar. 18, 1942.
Saginaw: Saginaw, Mich.....	19	20.0	8	24.3	Mar. 31, 1916.

¹ Preliminary.

The St. Marys River at Decatur, Ind., and the St. Joseph River at Montpelier, Ohio, exceeded flood stage during the month.

Atlantic Slope drainage.—Flood stages were reached on many streams from Maine to Georgia but in general there was no severe or extensive overflow. The Northeast was fortunate again this year in having a heavy snow cover melt gradually and move downstream without damaging stages or severe ice trouble.

Local floods in the upper Susquehanna River Basin on April 5 caused considerable damage in some areas. Flooding occurred in the lower portions of Wellsboro, Pa., and cities and towns in the Lackawanna River Valley. In the period April 1-5, 2 inches of rain fell in the Susquehanna drainage above Towanda, Pa., and 2.7 inches from Towanda to Wilkes-Barre, Pa. The Susquehanna and most of its tributaries at and above Wilkes-Barre exceeded flood stage but caused little or no damage in the main rivers.

East Gulf of Mexico drainage.—The Choctawhatchee River exceeded flood stage slightly on two occasions during the month.

Two periods of flood stages were also experienced on the Lower Tombigbee River and one period on the Upper Tombigbee River. Substantial rises were recorded on the Warrior River, but no flood stages were reached. The Alabama River was above flood stage at Millers Ferry, Ala., from the 18th to the 22d.

Locally, heavy rains fell over the Pearl River Basin on several occasions during the first half of April. Flood stages were reached in the upper portions of the stream near the middle of the month, and from Jackson, Miss., to Pearl River, La., the river was above flood stage most of the month. It remained above flood stage at the beginning of May. Damage was not great, and losses were limited mostly to lumbering operations in the river swamps and to loss of wages in those areas. Some damage to roads and bridges resulted from the flood waters.

Mississippi Basin.—Light overflow occurred at many points throughout the Mississippi Valley. Record-breaking floods occurred on April 5-7, in the head waters of the Allegheny River in Pennsylvania and New York.

Moderate flood stages were reached on the Mississippi River from Muscatine, Iowa, to below the mouth of the Ohio River. Flood stages were also exceeded in the lower portions of the Missouri, Arkansas, and Ohio Rivers as well as in many smaller tributaries. Overflow was generally not severe.

Severe local flooding occurred in the headwaters of the Allegheny River in northwestern Pennsylvania and western New York. The flooding resulted from 2 to 5 inches of rain accompanied by melting snow. The Allegheny River at Warren, Pa., exceeded the previous maximum stage of record that occurred in 1913 by almost 2 feet. The main street of Bradford, Pa., was covered by 6 feet or more of water, and much of the city of Meadville, Pa., was also flooded. Damage was estimated at more than a million dollars.

Local flooding did considerable damage in Carroll and Holmes Counties, Miss., as a result of heavy showers, averaging between 6 and 7 inches, which fell over most of Carroll and Holmes counties between 1 and 4 a. m., on the 11th. Many bridges were destroyed and considerable damage was done to flood control works.

West Gulf of Mexico drainage.—Flood stages were exceeded slightly during the month at a few stations in eastern Texas.

FLOOD STAGE REPORT FOR APRIL 1947

[All dates in April unless otherwise specified]

FLOOD STAGE REPORT FOR APRIL 1947—Continued

River and station	Flood stage	Above flood stages—dates		Crest ¹		River and station	Flood stage	Above flood stages—dates		Crest ¹	
		From—	To—	Stage	Date			From—	To—	Stage	Date
HUDSON BAY DRAINAGE						EAST GULF OF MEXICO DRAINAGE—CON.					
Red of North:	Feet			Feet			Feet			Feet	
Wahpeton, N. D.	6	8	15	7.8	12	Lock No. 1.	31	2	6	33.2	4
Moorhead, Minn.	17	10	23	28.9	15	Pascagoula: Merrill, Miss.	22	3	7	37.2	24
Grand Forks, N. D.	28	13	(?)	40.7	21	Bogue Chitto: Franklinton, La.	11	15	22	22.7	6
ST. LAWRENCE DRAINAGE						Pearl:	1	6	18.2	17	2
Lake Michigan						Edinburg, Miss.	20	14	19	21.9	16
Red Cedar:						Goshen Springs, Miss.	20	14	23	21.5	18
Williamston, Mich.	7	3	9	12.0	6	Jackson, Miss.	18	10	(?)	29.1	21
East Lansing, Mich.	8	3	10	12.3	6	Monticello, Miss.	15	3	5	19.0	4
Grand:						Columbia, Miss.	17	2	7	20.9	16
Eaton Rapids, Mich.	6	5	12	9.1	6	Pearl River, La.	12	11	(?)	18.9	4
Diamondale, Mich.	7	5	8	8.0	6			1	(?)	20.3	17
Lansing, Mich.	11	4	10	16.9	7	MISSISSIPPI SYSTEM					
Grand Lodge, Mich.	11	6	8	12.0	7	Upper Mississippi Basin					
Ionia, Mich.	21	6	10	23.6	7	Rock: Moline, Ill.	10	6	14	10.6	7-8
Lowell, Mich.	15	6	12	18.5	7-8	Iowa: Wapello, Iowa.	10	21	28	10.7	23-24
Grand Rapids, Mich.	15	7	12	17.6	9	Zumbro: Thellman, Minn.	35	19	23	11.0	23
Lake Huron						Whitewater: Beaver, Minn.	7	6	6	36.1	6
Shiawassee: Owosso, Mich.	7	4	11	10.3	6	Des Moines:				9.8	5
Flint: Flint, Mich.	11	5	10	16.3	6	Tracy, Iowa.	14	5	6	17.0	6
Cass: Vassar, Mich.	14	5	7	17.8	6			11	14	16.6	12
Saginaw: Saginaw, Mich.	19	7	10	19.8	8			20	21	18.0	21
Lake Erie								5	7	19.4	6
St. Marys: Decatur, Ind.	13	(26 30)	(?) 26	13.3	26	Eddyville, Iowa.	15	11	15	18.4	12
St. Joseph: Montpelier, Ohio.	10	(3 20)	13	13.7	7			20	22	18.5	21
ATLANTIC SLOPE DRAINAGE						Ottumwa, Iowa.	9	5	7	12.7	7
Merrimack:								11	15	11.4	13
Franklin Junction, N. H.	14	13	13	14.0	13			20	22	11.4	22
Bow, N. H.	5.5	14	14	5.5	14	Illinois:					
Connecticut:						Morris, Ill.	13	6	8	21.2	6
South Newbury, Vt.	22	13	15	24.2	13	Peru, Ill.	17	6	13	22.9	6
White River Junction, Vt.	18	12	14	19.0	12	Peoria, Ill.	18	21	25	18.0	22
Walpole, N. H.	30	13	13	30.9	13	Havana, Ill.	14	8	16	20.0	10
Montague City, Mass.	28	12	14	31.3	13	Beardstown, Ill.	14	7	(?)	17.9	11
Holyoke, Mass.	9	13	14	9.3	13	Bourbeuse: Union, Mo.	12	26	28	17.7	14-16
Hartford, Conn.	16	(8 13)	10	16.3	9	Meramec:					
			18	20.3	14	Sullivan, Mo.	11	25	27	25.5	26
Lackawaxen: Hawley, Pa.	9	5	5	10.0	5	Pacific, Mo.	11	22	22	13.0	22
Unadilla: Rockdale, N. Y.	11	7	7	10.2	7			25	29	24.0	28
Tloughnoga: Whitney Point, N. Y.	12	5	11	14.0	5	Valley Park, Mo.	14	25	30	28.2	28
Chenango:						Mississippi:					
Sherburne, N. Y.	8	6	9	9.4	6	Gordons Ferry, Iowa.	13	12	27	13.9	17
Greene, N. Y.	8	6	8	10.5	7			15	20	15.6	23
Binghamton, N. Y.	16	5	6	18.0	6	Muscatine, Iowa.	15	20	25	15.6	23
Chemung:						Keithsburg, Ill.	12	15	26	13.5	23
Corning, N. Y.	16	6	6	17.0	6			17	7	12.2	1
Elmira, N. Y.	12	5	6	16.0	6	Louisiana, Mo.	12	14	15	12.3	15
Chemung, N. Y.	12	6	7	18.0	6			19	19	12.0	19
Susquehanna:								22	22	12.0	22
Oneonta, N. Y.	12	3	15	16.4	6			25	27	12.1	25-27
Unadilla, N. Y.	11	6	7	11.1	6	Grafton, Ill.	18	8	(?)	24.6	28
Bainbridge, N. Y.	13	6	8	15.5	6			12	19	30.8	18
Conklin, N. Y.	11	5	7	15.0	6	St. Louis, Mo.	30	25	(?)	34.4	28
Binghamton, N. Y.	14	5	6	14.0	5	Chester, Ill.	27	10	(?)	34.7	20
Vestal, N. Y.	14	4	10	20.8	6	Cape Girardeau, Mo.	32	11	(?)	38.7	30
Towanda, Pa.	16	5	7	19.6	6	Missouri Basin					
Wilkes-Barre, Pa.	22	6	7	24.8	7	Solomon: Beloit, Kans.	18	10	12	22.4	11
Danville, Pa.	20	7	8	20.0	7			30	(?)	21.1	30
James: Columbia, Va.	10	3	3	10.3	3	Republican: Clay Center, Kans.	15	10	11	17.4	10
Roanoke: Williamston, N. C.	10	21	25	10.5	22	Little Blue:					
Neuse: Goldsboro, N. C.	14	18	20	14.4	19	Endicott, Nebr.	9	10	10	9.2	10
Cape Fear: Lock No. 2, Elizabethtown, N. C.	20	16	19	23.6	17	Hanover, Kans.	14	10	12	16.3	12
Pee Dee: Mars Bluff Bridge, S. C.	17	17	22	18.2	19	Big Blue:					
Black: Kingstree, S. C.	12	18	20	12.3	19	Barnston, Nebr.	18	10	11	22.2	11
Edisto: Orangeburg, S. C.	7	13	23	8.2	18	Blue Rapids, Kans.	20	10	12	23.4	12
Savannah: Butler Creek, Ga.	21	16	16	21.3	16	Randolph, Kans.	22	11	12	22.6	12
Ogeechee: Dover, Ga.	7	1	26	8.6	17	Kansas:					
Ocmulgee: Abbeville, Ga.	11	17	25	12.4	18	Manhattan, Kans.	17	11	12	19.4	11
Oconee: Milledgeville, Ga.	20	15	15	20.0	15	Wamego, Kans.	16	12	12	16.4	12
Altamaha:						LeCompton, Kans.	17	11	11	17.1	11
Charlotte, Ga.	12	(1 16)	11	12.8	4-5	Grand:					
			(?) 26	16.8	23-24	Gallatin, Mo.	20	5	6	23.1	5
Piney Bluff, Ga.	17	18		19.0	22			4	8	30.7	6
EAST GULF OF MEXICO DRAINAGE						Chillicothe, Mo.	18	11	13	26.4	11
Flint: Albany, Ga.	20	17	17	21.5	17			21	21	22.1	21
Apalachicola: Blountstown, Fla.	15	1	(?)	20.5	20	Brunswick, Mo.	12	5	18	20.7	9
Choctawhatchee: Caryville, Fla.	12	5	7	12.2	6			21	24	13.8	22
						Pottawatomie: Garnett, Kans.	26	5	5	28.8	5
Alabama: Millers Ferry, Ala.	40	18	22	42.2	21	Osage:					
Black Warrior: Lock No. 7, Eutaw, Ala.	35	14	19	39.8	16-17	Quenemo, Kans.	30	5	6	33.8	5
Tombigbee:								11	11	38.8	11
Aberdeen, Miss.	34	13	17	37.3	13	Ottawa, Kans.	24	5	7	27.6	6
Columbus, Miss.	29	15	16	29.4	15			11	12	27.1	12
Gainesville, Ala.	36	15	26	43.4	21-22			5	8	35.8	6
Lock No. 4, Demopolis, Ala.	39	13	28	51.5	19	Oswatimie, Kans.	28	5	16	33.6	13
Lock No. 3.	33	(2 12)	4	37.1	3	LaCygne, Kans.	25	5	18	30.0	7-8
			(?) 20	53.3	21	Trading Post, Kans.	24	5	19	27.0	8
Lock No. 2.	46	14	20	54.9	22	Oseola, Mo.	22	12	20	25.4	13
EAST GULF OF MEXICO DRAINAGE—CON.								25	28	28.0	27
Lock No. 1.	31	(2 14)	6	33.2	4	Warsaw, Mo.	31	12	18	32.0	14
Pascagoula: Merrill, Miss.	22	(3 15)	7	37.2	24			25	29	34.4	27
Bogue Chitto: Franklinton, La.	11	1	22	22.7	6	Lakeside (Bagnell Dam), Mo.	60	15	17	60.2	16
Pearl:								25	29	61.8	27
Edinburg, Miss.	20	14	19	21.9	16	See footnotes at end of table.					
Goshen Springs, Miss.	20	14	23	21.5	18						
Jackson, Miss.	18	10	(?)	29.1	21						
Monticello, Miss.	15	3	5	19.0	4						
Columbia, Miss.	17	2	7	20.9	16						
Pearl River, La.	12	11	(?)	18.9	4						
		1	(?)	20.3	17						
				16.0	16						
MISSISSIPPI SYSTEM											
Upper Mississippi Basin											
Rock: Moline, Ill.	10	6	14	10.6	7-8						
Iowa: Wapello, Iowa.	10	21	28	10.7	23-24						
Zumbro: Thellman, Minn.	35	19	23	11.0	23						
Whitewater: Beaver, Minn.	7	6	6	36.1	6						
Des Moines:				9.8	5						
Tracy, Iowa.	14	5	6	17.0	6						
		11	14	16.6	12						
		20	21	18.0	21						
		5	7	19.4	6						
Eddyville, Iowa.	15	11	15	18.4	12						
		20	22	18.5	21						
Ottumwa, Iowa.	9	5	7	12.7	7						
		11	15	11.4	13						
		20	22	11.4	22						
Illinois:											
Morris, Ill.	13	6	8	21.2	6						
Peru, Ill.	17	6	13	22.9	6						
Peoria, Ill.	18	21	25	18.0	22						
Havana, Ill.	14	8	16	20.0	10						
Beardstown, Ill.	14	7	(?)	17.9	11						
Bourbeuse: Union, Mo.	12	26	28	17.7	14-16						
Meramec:											
Sullivan, Mo.	11	25	27	25.5	26						
Pacific, Mo.	11	22	22	13.0	22						
Valley Park, Mo.	14	25	30	28.2	28						
Mississippi:											
Gordons Ferry, Iowa.	13	12	27	13.9	17						
Muscatine, Iowa.	15	20	25	15.6	23						
Keithsburg, Ill.	12	15	26	13.5	23						
				12.2	1						
				12.3	15						
Louisiana, Mo.	12	14	15	12.0	19						
		19	19	12.0	19						
		22	22	12.0	22						
		25	27	12.1	25-27						
Grafton, Ill.	18	8	(?)	24.6	28						
		12	19	30.8	18						
St. Louis, Mo.	30	25	(?)	34.4	28						
Chester, Ill.	27	10	(?)	34.7	20						
Cape Girardeau, Mo.	32	11	(?)	38.7	30						
Missouri Basin											
Solomon: Beloit, Kans.	18	10	12	22.4	11						
		30	(?)	21.1	30						
Republican: Clay Center, Kans.	15	10	11	17.4	10						
Little Blue:											
Endicott, Nebr.	9	10	10	9.2	10						
Hanover, Kans.	14	10	12	16.3	12						
Big Blue:											
Barnston, Nebr.	18	10	11	22.2	11						
Blue Rapids, Kans.	20	10	12	23.4	12						
Randolph, Kans.	22</										

See footnotes at end of table.

FLOOD STAGE REPORT FOR APRIL 1947—Continued

River and station	Flood stage	Above flood stages—dates		Crest ¹	
		From—	To—	Stage	Date
Missouri Basin—Continued					
Osage—Continued	Feet			Feet	
St. Thomas, Mo.....	23	{ 16	17	23.0	16, 17
		{ 25	(?)	29.8	28
Gasconade: Jerome, Mo.....	15		28	23.4	27
Missouri:					
Moberly, S. D.....	16	Mar. 30	Mar. 31	18.3	Mar. 31
Pierson, S. D.....	15		1	18.5	1
Blair, Nebr.....	19		6	20.0	6
		{ 4	8	17.2	7
Nebraska City, Nebr.....	15	{ 10	12	16.2	11
St. Joseph, Mo.....	17	{ 26	26	17.0	26
Kansas City, Mo.....	22	{ 12	13	23.3	12
		{ 5	8	23.2	6
Lexington, Mo.....	22	{ 11	15	23.9	13
Waverly, Mo.....	18	{ 5	15	21.8	13
Boonville, Mo.....	21	{ 6	17	25.5	11
Jefferson City, Mo.....	23	{ 7	17	25.8	11
		{ 7	19	25.7	12, 13
Hermann, Mo.....	21	{ 25	(?)	26.3	26
St. Charles, Mo.....	25		(?)	31.8	27
Ohio Basin					
Allegheny:					
Olean, N. Y.....	10	5	9	15.8	7
Warren, Pa.....	14	5	8	17.0	5
Franklin, Pa.....	17	6	7	19.1	6
Lock No. 4, Natrona, Pa.....	24	6	7	25.8	6
Lock No. 3, Acmetonia, Pa.....	25	7	7	26.3	7
Port Allegheny, Pa.....	9	6	6	10.8	6
Scioto:					
Circleville, Ohio.....	14	22	22	14.2	22
Piketon, Ohio.....	15	{ 22	24	18.3	22
		{ 27	28	15.6	28
Rough: Dundee, Ky.....	25	{ 17	21	27.4	19
Green:					
Lock No. 4, Woodbury, Ky.....	33	18	19	33.7	18
Lock No. 2, Rumsey, Ky.....	34	20	22	34.6	20
West Fork:					
Anderson, Ind.....	10	26	26	10.7	26
Elliston, Ind.....	18	{ 12	14	20.0	13
		{ 26	(?)	21.6	28
		{ 6	19	18.0	13-14
Edwardsport, Ind.....	12	{ 21	22	12.3	22
		{ 26	(?)	19.4	30
East Fork: Seymour, Ind.....	14	{ 27	28	14.5	27
White:					
Petersburg, Ind.....	16	{ 11	21	18.8	15-16
		{ 26	(?)	19.7	29
Hazleton, Ind.....	16	{ 9	(?)	20.6	30
Wabash:					
Wabash, Ind.....	12	30	(?)	15.8	30
		{ 13	13	11.4	13
		{ 22	23	11.9	22
Lafayette, Ind.....	11	{ 27	28	12.9	27
		{ 30	(?)	13.0	30
		{ 28	28	16.1	28
Covington, Ind.....	16	{ 30	(?)	16.7	30
Terre Haute, Ind.....	14	{ 26	(?)	15.2	27, 30
Vincennes, Ind.....	14	{ 26	(?)	15.7	30
Mt. Carmel, Ill.....	17	{ 27	(?)	19.3	30
New Harmony, Ind.....	15	{ 30	(?)	15.0	30
Ohio:					
Shawneetown, Ill.....	33	14	17	33.7	15
Lock No. 50, Fords Ferry, Ky.....	34	13	22	35.9	15-16
Dam No. 52, Brookport, Ill.....	37	15	22	38.5	19
Dam No. 53, Mound City, Ill.....	42	12	(?)	46.5	18
Cairo, Ill.....	40	10	(?)	47.1	20
White Basin					
Black:					
Poplar Bluff, Mo.....	16	{ 13	13	16.3	13
		{ 27	28	18.8	27
		{ 11	18	15.8	12
Black Rock, Ark.....	14	{ 29	(?)	14.8	30
White:					
Batesville, Ark.....	23	28	28	23.0	28
Georgetown, Ark.....	21	18	22	21.6	19-20
Clarendon, Ark.....	26	23	(?)	26.4	25-27
St. Charles, Ark.....	25	26	(?)	25.3	30
Arkansas Basin					
Little Arkansas:					
Sedgwick, Kans.....	18	{ 11	11	19.3	11
		{ 13	14	23.1	13
Ripley, Kans.....	11	{ 14	14	13.3	14

FLOOD STAGE REPORT FOR APRIL 1947—Continued

River and station	Flood stage	Above flood stages —dates		Crest 1	
		From—	To—	Stage	Date
Arkansas Basin—Continued					
	Feet			Feet	
Nimnescah: Peck, Kans.....	17	{ 11	11	17.4	11
Walnut: Winfield, Kans.....	23	{ 14	14	18.5	14
Deep Fork: Dewar, Okla.....	18	{ 13	16	31.0	14
Cimarron: Perkins, Okla.....	11	{ 20	(?) 16	20.6	22
Verdigris:				13.5	14
Independence, Kans.....	36	{ 13	16	41.8	15
Coffeyville, Kans.....	20	{ 16	17	21.0	16
Claremore, Okla.....	38	{ 16	21	44.4	20
Cottonwood: Emporia, Kans.....	20	{ 26	27	38.3	27
Neosho:		{ 11	16	24.2	14
Neosho Rapids, Kans.....	22	{ 12	15	23.0	12
Burlington, Kans.....	27	{ 13	17	30.4	13
		{ 6	5	24.1	5
LeRoy, Kans.....	23	{ 11	11	23.2	11
		{ 13	17	25.3	13
Iola, Kans.....	15	{ 6	6	19.0	5
		{ 11	18	19.1	16
Chanute, Kans.....	20	{ 5	7	24.5	6
Parsons, Kans.....	24	{ 11	20	25.2	16
		{ 14	20	25.4	19
Oswego, Kans.....	17	{ 8	9	19.1	9
		{ 12	21	21.8	19-20
		{ 26	26	18.5	26
North Canadian: Yukon, Okla.....	11	{ 12	16	13.0	13
Poteau: Poteau, Okla.....	21	{ 29	29	12.4	29
Fouche La Pave: Perryville, Ark.....	20	{ 11	14	27.0	12
		{ 13	23	24.4	18
		{ 28	(?) 25.3	25.3	30
Arkansas:					
Oxford, Kans.....	14	{ 15	15	14.3	15
Arkansas City, Kans.....	16	{ 12	17	20.2	15
Balston, Okla.....	16	{ 15	17	19.4	16
Tulsa, Okla.....	12	{ 15	18	15.9	16
Webbers Falls, Okla.....	23	{ 15	19	26.4	16
		{ 26	(?) 24.8	24.8	29
		{ 12	13	22.6	13
Fort Smith, Ark.....	22	{ 16	20	25.4	17
		{ 27	(?) 25.2	25.2	30
		{ 16	20	25.4	17
Van Buren, Ark.....	22	{ 27	(?) 24.9	24.9	27
		{ 27	(?) 25.8	25.8	30
		{ 14	14	22.0	14
Dardanelle, Ark.....	22	{ 17	20	24.0	18
		{ 29	(?) 22.4	22.4	29
Red Basin					
Sulphur:					
Hagansport, Tex.....	38	{ 14	16	38.4	16
Naples, Tex.....	22	{ 17	24	24.7	19
Lower Mississippi Basin					
St. Francis:					
Fisk, Mo.....	20	{ 12	20	22.7	14-15
		{ 26	(?) 23.1	23.1	28-30
St. Francis, Ark.....	18	{ 15	(?) 19.7	19.7	19-20
Tallahatchie: Swan Lake, Miss.....	26	{ 15	23	27.8	18
Yazoo: Greenwood, Miss.....	35	{ 18	24	35.7	20
Mississippi:					
New Madrid, Mo.....	34	{ 13	(?) 37.5	37.5	20-21
Caruthersville, Mo.....	32	{ 14	(?) 35.8	35.8	21-22
Atchafalaya Basin					
Atchafalaya: Atchafalaya, La.....	25	{ 19	(?) 26.4	26.4	29-30
WEST GULF OF MEXICO DRAINAGE					
Whiskey Chitto: Mittie, La.....	15	{ 12	14	18.9	12
Calcasieu: Kinder, La.....	16	{ 13	17	17.8	14
Sabine:					
Mineola, Tex.....	14	{ 13	22	17.3	15
Gladewater, Tex.....	26	{ 18	25	31.4	21
Neches: Evadale, Tex.....	16	{ 1	1	16.0	1
East Fork: Rockwall (nr.), Tex.....	10	{ 16	18	11.6	17
Trinity:					
Trinidad, Tex.....	28	{ 14	19	33.4	16
Long Lake, Tex.....	40	{ 20	22	40.0	20
Liberty, Tex.....	24	{ 26	28	24.4	28
Guadalupe: Victoria, Tex.....	21	{ 16	16	21.3	16

¹ Provisional.² Continued at end of month.